

REMARKS

Claims 53 - 65 and 164 - 176 have been canceled. Claim 89 has been amended to correct a minor error. Thus, claims 1 - 52 and 66 - 163 remain pending in the present application. Applicants would like to thank the Examiner for the finding of allowable subject matter in claims 1 - 52, 66 - 88, 101 - 103, 127 - 129 and 148 - 150. In view of the following remarks, it is respectfully submitted that all of the currently pending claims are in condition for allowance.

Claims 89 - 100, 104 - 126, 130 - 147 and 151 - 163 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,190,544 to Chapman ("Chapman") in view of U.S. Patent No. 5,709,686 to Talos et al. ("Talos") and U.S. Patent No. 5,085,660 to Lin ("Lin").
7/19/10 Office Action, p. 2.

Claim 89 recites a bone plate "having a longitudinal axis" and comprising "an upper surface" and "a lower surface" along with "at least one first type of hole, the first type of hole being elongated and extending through the upper and lower surfaces, and having a central axis and a longitudinal axis, *wherein the first type of hole is at least partially threaded and the threaded portion of the hole tapers inward with respect to the central axis*" and "at least a second type of hole extending through the upper and lower surfaces, the second type of hole including an internal thread configured and dimensioned for engaging a threaded portion of a screw head.

As acknowledged by the Examiner, neither Chapman nor Lin show or suggest a first type of hole including a partially threaded portion that tapers inward with respect to a central axis. Examiner cites Talos to cure this deficiency. It is respectfully submitted, however, that Talos discloses a hole including a threaded portion that is substantially cylindrical, maintaining a constant distance from a central axis thereof. Specifically, Talos describes a bone plate including a hole 2 that is elongated along a longitudinal axis 1 of the plate. *Talos*, at col. 2, ll. 30 - 34. The hole 2 includes an upper part facing away from a bone application surface 4 and comprising a

conical flaring countersink area 5. *Id.* at col. 2, ll. 51 - 54. The hole 2 further includes a lower part of the hole 2 facing a bone application surface 4 that is approximately circular in the direction transverse to the plate and flares conically in a direction along the longitudinal axis 1. *Id.* at col. 2, ll. 35 - 39. The circular segment of the hole 2 includes a thread 3, which only runs in the lateral part of the plate. *Id.* at col. 2, ll. 40 - 44. This partial inside thread 3 receives a bone screw 6 with a threaded head 9. *Id.* at col. 2, ll. 45 - 46. It is respectfully submitted that Talos does not describe anywhere in the specification that the threaded portion 3 tapers inward toward a central axis of the hole 2. Indeed, as shown in Fig. 7, a lateral cross-sectional view of the bone plate, the threaded portion 3 does not taper, but rather, remains substantially equidistant relative to the central axis such that the threaded portion 3 is formed by a partially cylindrical shape.

The Examiner concedes that the partial inside thread 3 does not taper, but points to the conical countersink 5 to show the tapered threaded portion. *7/19/10 Office Action*, p. 5. The Examiner asserts that the conical countersink 5 is directly connected to the partial thread 3 and is thus considered part of a threaded portion of the hole 2. *Id.* As would be understood by those of skill in the art, and as supported by the Specification, it is respectfully submitted that a “threaded portion” of a hole refers to the specific portion of the hole that includes threads. A hole forms an inherently continuous surface such that all portions of the hole are directly connected to one another. It is respectfully submitted that mere connection to a partial threading does not render all adjacent areas of the hole a threaded portion of the hole. In addition, the Specification consistently describes the threaded portion of the hole as the specific portion of the hole that includes threads. For example, the Specification states that the “combination hole 4C is thus provided with *a threaded portion which includes a thread 5*, and a non-threaded portion which includes no threads disposed thereon.” *Specification*, p. 6, ll. 25 - 26 (emphasis added). Thus, it is respectfully submitted that the Specification clearly states that any portion that does not include threads is considered a non-threaded portion. Indeed, the Specification uses the terms “threaded portion” and “threads” interchangeably, indicating that the threaded portion

specifically corresponds to the portion of the hole including the threads. For example, the Specification states that “*the threaded portion (thread 5) extends over a second angle with respect to the central axis.*” *Specification*, p. 6, ll. 29 - 32 (emphasis added). Thus, it is respectfully submitted that it would be clearly understood by one of ordinary skill in the art that a threaded portion refers to a specific portion of the hole that includes threads. Therefore, it is respectfully submitted that the countersink 5 of Talos does not represent part of the threaded portion of the hole 2.

Accordingly, it is respectfully submitted that neither Chapman, Talos nor Lin, either alone or in combination, show or suggest “*wherein the first type of hole is at least partially threaded and the threaded portion of the hole tapers inward with respect to the central axis,*” as recited in claim 89. Thus, it is respectfully submitted that claim 89 is not rendered obvious by Chapman in view of Talos and Lin and that the rejection of this claim should be withdrawn. Because claims 90 - 100 and 104 - 114 depend from and include all of the limitations of claim 89, it is respectfully submitted that these claims are also allowable.

Similarly, claim 115 recites a bone plate having a longitudinal axis and comprising “an upper surface” and “a lower surface” along with “at least one first type of hole, the first type of hole being elongated and extending through the upper and lower surfaces, and having a central axis and a longitudinal axis, *wherein the first type of hole is at least partially threaded and the threaded portion of the hole tapers inward with respect to the central axis*” and “at least a second type of hole extending through the upper and lower surfaces, wherein the second type of hole is substantially non-threaded.”

For at least the same reasons as discussed above in regard to claim 89, it is respectfully submitted that claim 115 is not rendered obvious by Chapman in view of Talos and Lin, and that the rejection of this claim should be withdrawn. Because claims 116 - 126 and 130 - 140 depend from and include all of the limitations of claim 115, it is respectfully submitted that these claims

are also allowable.

Claim 141 recites a bone plate having a longitudinal axis and comprising “an upper surface” and “a lower surface” along with “at least one first type of hole extending through the upper and lower surfaces, and having a first central axis and being elongated in a direction substantially aligned with the longitudinal axis, wherein the first type of hole is non-threaded and has an outer perimeter, at least a portion of the outer perimeter tapering inward from the upper surface to the lower surface to form at least one ramp surface for engagement with a first screw head” and “at least a second type of elongated hole extending through the upper and lower surfaces, the second type of hole having a second central axis and a longitudinal axis, *wherein the hole is at least partially threaded and the threaded portion of the hole tapers inward with respect to the second central axis.*”

For at least the same reasons as discussed above in regard to claim 115, it is respectfully submitted that claim 141 is not rendered obvious by Chapman in view of Talos and Lin, and that the rejection of this claim should be withdrawn. Because claims 142 - 147 and 151 - 163 depend from and include all of the limitations of claim 141, it is respectfully submitted that these claims are also allowable.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that all of the pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

Dated:

9/20/10

By: 

Oleg F. Kaplun, Esq. (Reg. No. 45,559)

Fay Kaplun & Marcin, LLP

150 Broadway, Suite 702

New York, NY 10038

Tel: (212) 619-6000

Fax: (212) 619-0276